

Claims

1. A method for transmitting data packets, where
 - a packet data connection is indicated with a connection identifier and the destination of the packet data connection is indicated with a destination identifier,
 - 5 - data packets are sorted (504, 505) into initialized transmission queues before transmission,
 - a destination identifier is involved in the initialization of a transmission queue,
 - at least one connection identifier is related to each transmission queue,
 - a set of proper connection identifiers is the union of the connection identifiers
 - 10 related to the initialized transmission queues and
 - a data packet having a proper connection identifier is placed (505) to the transmission queue determined by the connection identifier, characterized in that
 - the initialization of a new transmission queue is triggered (506, 508) by a data packet not having a proper connection identifier and having a destination identifier
 - 15 and
 - after a successful initialization of a new transmission queue the data packet that triggered the initialization is placed (509) to the new transmission queue.
2. A method according to claim 1, characterized in that the activation of a new queue is triggered by a data packet not having a queue identifier.
- 20 3. A method according to the claim 1, characterized in that the activation of a new queue is triggered by a data packet having a queue identifier that is not a proper queue identifier.
4. A method according to claim 1, characterized in that the sender of a data packet is notified (605) if the initialization of a new transmission queue is not
- 25 successful.
5. A method according to claim 1, characterized in that a certain data field in a protocol packet header is used as the connection identifier.
6. A method according to claim 5, characterized in that a flow label of General Packet Radio Service Tunneling Protocol header is used as the connection identifier
- 30 and a certain cellular network subscriber identifier is used as the destination identifier.

7. A method according to claim 1, characterized in that transmission resources in a radio access network are reserved, when the initialization of a new queue is triggered.
- 5 8. A method according to claim 7, characterized in that transmission resources are reserved using Radio Access Network Application Part in Universal Mobile Communication System.
9. A network element, which comprises
- means for storing data packet to transmission queues,
 - means for indicating (804) the connections related to each transmission queue with
 - 10 connection identifiers,
 - means for detecting (802) a connection identifier in a data packet, and
 - means for placing (805) a data packet to an initialized transmission queue whose connection identifier is equal to the connection identifier in the data packet,
 - 15 characterized in that it further comprises means for triggering (806) the initialization of a new transmission queue on the arrival of a data packet not having a connection identifier equal to any of the connection identifiers of the transmission queues and having a destination identifier.
10. A network element according to claim 9, characterized in that it is a network element of a cellular network.
- 20 11. A network element according to claim 10, characterized in that it is a network element of a Universal Mobile Telecommunication System.
12. A network element according to claim 11, characterized in that it is a radio network controller.
- 25 13. A network element according to claim 10, characterized in that it is a network element of a General Packet Radio Service core network.
14. A network element according to claim 13, characterized in that it is a Serving GPRS Supporting Node.